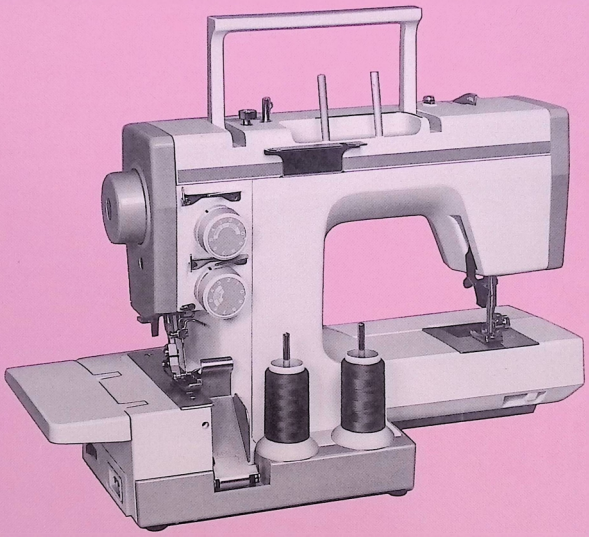
MODERN & PROFESSIONAL HOME SERGING

WITH

COMBI DX



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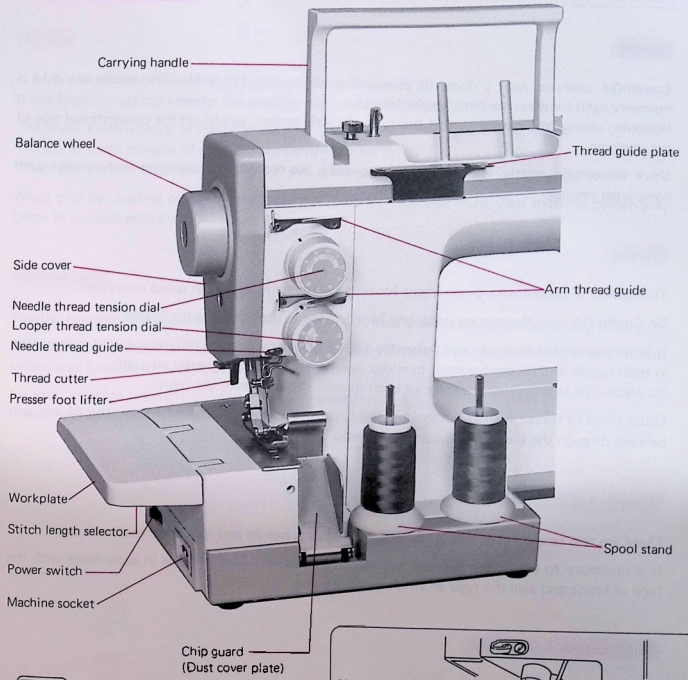
Thank you very much for purchasing a Combi-DX sewing machine.

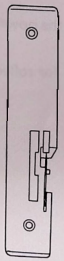
This booklet introduces you to the applications and techniques of serging with your Combi-DX sewing machine.

You will be amazed as to how serging simplifies and saves time while obtaining professional results.

Once you have experienced Combi serging you will wonder how you ever did without it.

NAMES OF PARTS

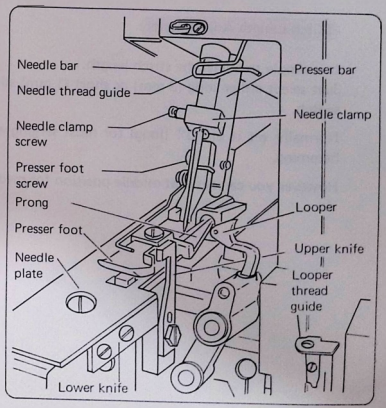




Rolled hemming needle plate

Rolled hemming foot

Flatlock guide plate



GENERAL

Needle

Combi-DX operates with a domestic standard needle system (15 X 1). The needle size #14 is normally used for most medium-weight fabrics.
However, change the needle to suit the type of fabric as you would on the conventional side of the machine.

Since the needle greatly affects the stitch quality, we recommend changing needles after each completed project.

Thread

The quality of thread is very important for serging especially with high speed operation.

On Combi-DX, two threads are used, one for the needle, the other for the looper.

It is recommended that you use polyester thread or cotton covered polyester rather than cotton in both needle and looper for most overlock sewing because it has greater strength.
To obtain the best results, the color of both threads should match the fabric.

Other kinds of thread such as buttonhole twist, yarn, metallic thread, embroidery thread, etc. can be used through the looper for decorative sewing.

Tension Adjustments

There are two tension dials which respectively regulate needle and looper thread tensions.

It is necessary to adjust the tensions to balance the loops of both threads in accordance with the type of fabric and also the type of stitch you are using.

Stitch Length Adjustments

It is simple to adjust the stitch length.
Just select either long (3 mm) or short (1 mm) stitch length by push lever located near the power switch.

Normally set it at "3" (long) for most serging while the short stitch (1 mm) is used for rolled hemming.

However you can set it at middle position for medium stitch length if necessary.

Knives

It is very important to maintain sharp knife blades.
If the fabric is not cut cleanly, the stitches may not form properly.

The lower knife is made of hard carbon steel.
The upper knife is made of steel that is slightly less hard.
When the fabric is no longer cut cleanly, you will normally need to replace the upper knife.

When you use basting pins, be sure that these pins are removed from your material before they come in contact with the blades.

Maintenance

Regular maintenance will insure that your Combi-DX runs trouble free and lasts a long time.

Clean around knives and looper with a brush after every project. A great amount of lint collects in this area because of cutting action of the machine.

Oil your machine regularly to keep it running smoothly.
Please refer to the instruction book for location of oiling points.

SERGING TECHNIQUES

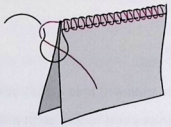
Securing Ends

The serger side of your Combi-DX does not have reverse stitch capability.
To avoid seam ends that might unravel, it is necessary to leave a thread chain about 2" long at the beginning and end of a seam.

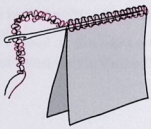
To secure the beginning and end of a seam, choose one of the following methods.

At the beginning

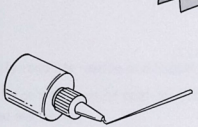
1. Separate the thread end and tie a knot.



2. Thread the chain through a large eyed needle and weave that chain through the overlock stitches on the fabric.



3. Cut the chain at the edge of fabric. Then apply a small amount of seam sealant (Fray Check™) on the end of the threads.

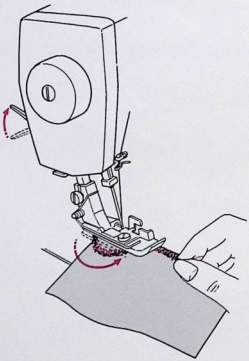


4. Backstitching

   (1) Before putting your fabric in the machine, sew a thread chain about 2" long behind the needle.

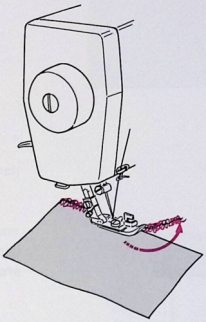
   (2) Put your fabric in the machine. Then serge a few stitches and stop.

   (3) Raise the presser foot and bring the thread chain to the left around and under the presser foot.



(4) Place the thread chain between the presser foot and upper knife blade, holding it in position as you lower the presser foot to sew.

(5) After sewing about one inch, move the chain to the right and under the upper knife blade, cutting the chain as you sew.

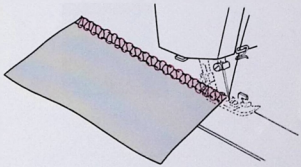


At the End

You can use the same methods to secure the end of the seam except "Back-stitching".

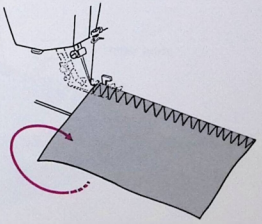
or

(1) Serge one stitch off the end of the seam.

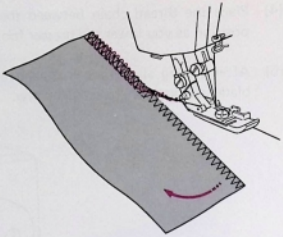


(2) Raise the needle and the presser foot and gently pull the threads off the prong.

(3) Turn the fabric over so the underside is up.



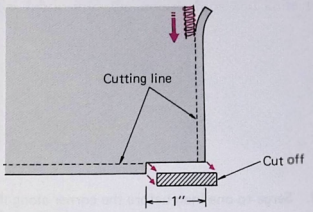
(4) Serge about one inch over stitching and angle off the fabric.



Turning Corners

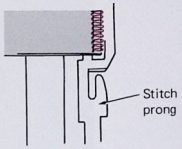
Outside Corners

1. Cut the corner as illustrated below with a pair of scissors.

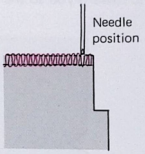


2. Serge the first side taking one stitch beyond the cut edge of fabric.

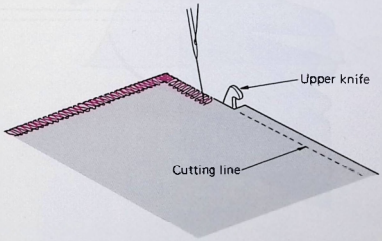
3. Raise the needle and the presser foot. Then gently pull the thread chain off the stitch prong and rotate the fabric.



4. Begin sewing second side with needle positioned to start just below the previous row of stitching.

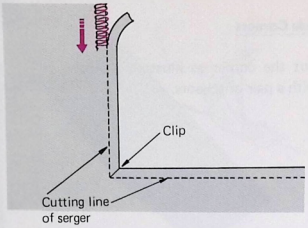


5. Then continue serging.

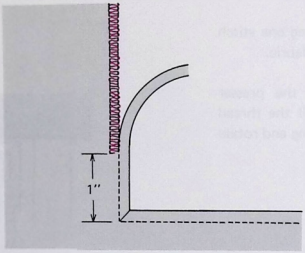


Inside Corners

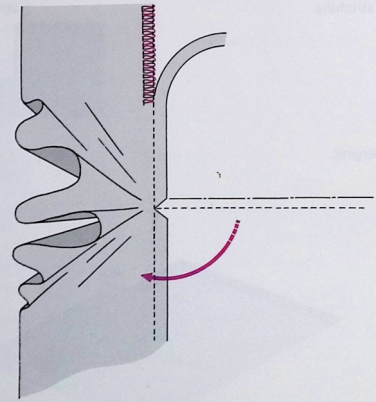
1. Clip to corner as illustrated with a pair of scissors.



2. Serge to one inch before the corner along the cutting line against the knife blade.



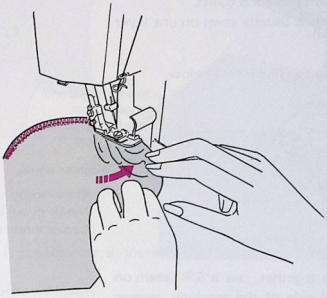
3. Pull the fabric toward you so the cutting line of the fabric is straight. Then continue serging.



Curve Edging

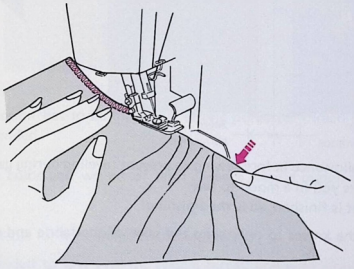
Outside Curves

Serge around the curve slowly while pushing the fabric into the presser foot and knife to straighten the edge.



Inside Curves

Serge the curve slowly while pulling the front part of the fabric to straighten the edge.

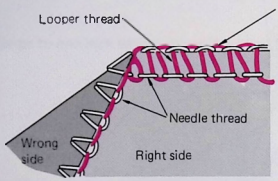


APPLICATIONS

Overedging

Overedging by serger is the simplest and quickest way of finishing the raw edges of fabrics.
This seam is usually used when you want to open the seam allowances on jackets & pants.
Accordingly this seam is usually sewn on one layer of fabric.

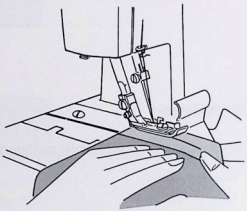
The overedge is formed as illustrated below.

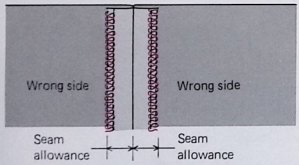


Machine setting:

Stitch length:	3
Needle thread tension:	0 to 3
Looper thread tension:	3 to 6

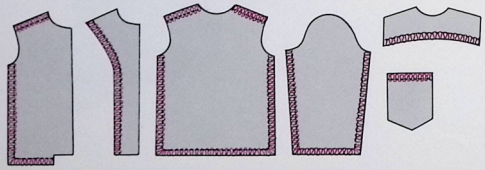
1. With right sides together, sew a 5/8" seam on the conventional side of the machine, reverse stitching at beginning and end.
2. Serge seam allowances separately, guiding the seam next to the left edge of the serging foot. Serger trims 1/8".
3. Press the seam allowance open.





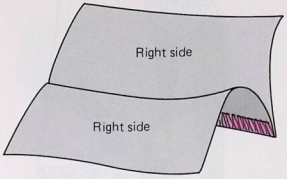
Finish the seam allowance before sewing to prevent raveling during garment construction.
Finishing also puts you in a mood to sew.
When the garment is finished, so is the finishing!

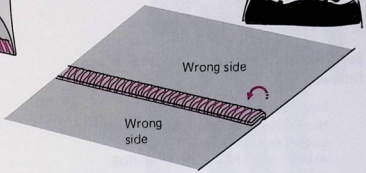
However, allow the knives to only skim the edge of the fabric and not cut off part of the seam allowance.
In an unlined jacket, you would finish the following edges first:



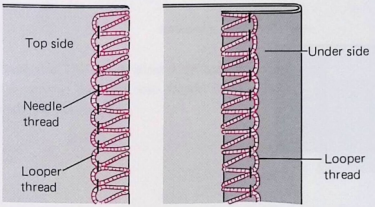
Seamlock

With your Combi-DX, you can trim, overedge and seam in one operation, when constructing shirts, blouses, swimsuites and all types of sportswear made of knit fabrics.
The flat narrow seamlock can be pressed to one side.





To get the seamlock stitch, it is necessary to increase the needle thread tension and decrease the looper thread tension.
The stitch should look as illustrated below.



Machine setting:

Stitch length:	3
Needle thread tension:	5 to 8
Looper thread tension:	0 to 3

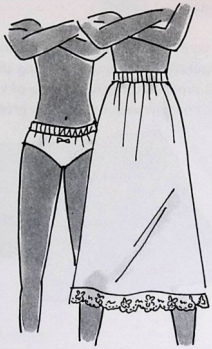
Since the needle thread tension has to be increased, strong polyester thread or cotton covered polyester thread is recommended.

For functional sewing, the color and weight of both threads should match the fabric you are sewing.

Note: This seam is not suitable for light-weight woven fabrics.

Also it is recommended to sew over the needle thread line with straight stitch where a great deal of strain is received.

Seamlock Elastic (For wide elastic band)



Use this technique to apply elastic when making lingerie.

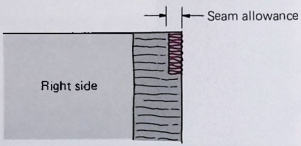
* It is recommended to use soft elastic band.
  (The stitches may be formed unevenly or skipped on thick and hard elastic band.)

1. Use wooly nylon thread in looper.

2. Set the macine for seamlock stitch as follows:

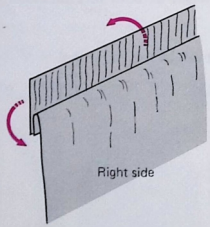
   Stitch length: 3
   Needle thread tension: 5 to 8
   Looper thread tension: 0 to 3
   Attach the FLATLOCK GUIDE PLATE on needle plate.

3. Place the elastic on top of the right side of the fabric even with the raw edge.



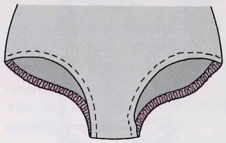
4. Serge from elastic side along the edge of the fabric stretching the elastic in front of the needle while guiding both edges against the FLATLOCK GUIDE PLATE. (without trimming)

5. Turn the elastic up and press seam allowance toward the garment.



Seamlock Elastic (For narrow elastic band)

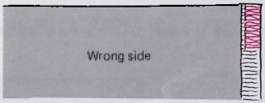
Apply elastic in the following manner when making swimsuites or leotards.



1. Set the machine for seamlock stitch as follows:

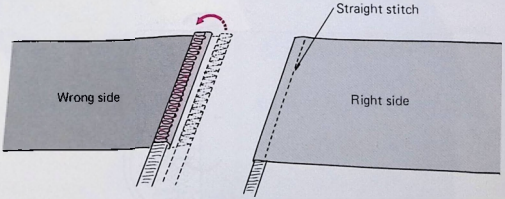
   Stitch length: 3
   Needle thread tension: 5 to 8
   Looper thread tension: 0 to 3
   Attach the FLATLOCK GUIDE PLATE on needle plate.

2. Place the 1/4" wide elastic on top of the wrong side of the fabric even with the raw edge.



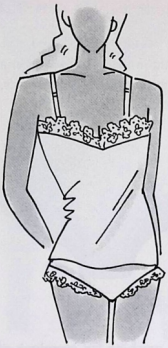
3. Serge from elastic side along the edge of the fabric stretching the elastic in front of the needle while guiding both edges against the FLATLOCK GUIDE PLATE. (without trimming)

4. Fold elastic to the wrong side, stitch through the elastic from the right side with a straight stitch.
   Make sure you stretch the elastic as you sew the straight stitch to eliminate popped stitches.



Seamlock Lace Application

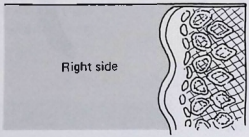
Use this narrow inconspicuous seamlock to attach lace edging to lingerie or evening wear.



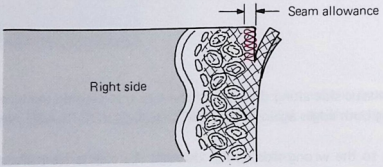
1. Set the machine for seamlock stitch as follows:

Stitch length:	3
Needle thread tension:	5 to 8
Looper thread tension:	0 to 3

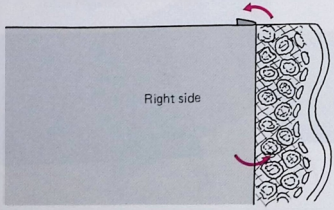
2. Place the lace on top of the fabric with right sides together.



3. Serge from lace side trimming the edges as you sew.



4. Press the seam allowance toward the garment.



Decorative Flatlock (Topstitching)

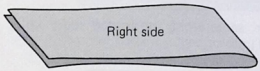
With your Combi-DX, a whole new world of decorative sewing opens up.
Try using the following method to create a braid effect across the front of a blouse or around the bottom of a skirt.

1. Use ornamental threads, yarns or ribbons in looper. Regular overlock thread, a fine sewing thread or transparent thread can be used in the needle.
   You can also use a topstitching thread in the needle for different effects.

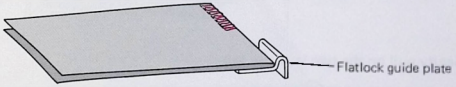
2. Set the machine as follows:

   Stitch length: 3
   Needle thread tension: 0 to 3
   Looper thread tension: 2 to 5
   Attach the FLATLOCK GUIDE PLATE on needle plate.

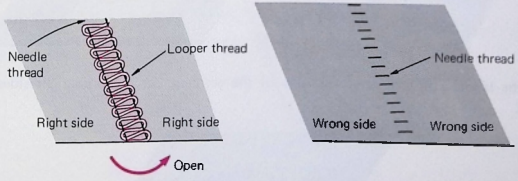
   Fold your fabric with wrong side together.



   Serge along the folded edge while guiding it against the FLATLOCK GUIDE PLATE. (without trimming)



5. Gently open the fabric and press.



Flat Joining (Patchwork)

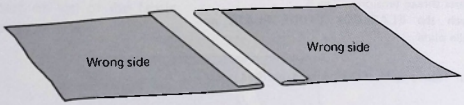
This type of seam is used often on sportswear made of knit fabrics such as sweatshirts, dresses and jogging outfits.

* It is recommended to use ornamental string, metallic thread or yarn on looper if you desire to decorate the joining lines.

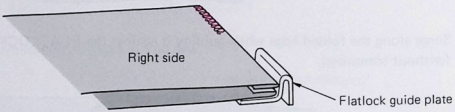
1. Set the machine as follows:

   Stitch length: 3
   Needle thread tension: 0 to 3
   Looper thread tension: 2 to 5
   Attach the FLATLOCK GUIDE PLATE on needle plate.

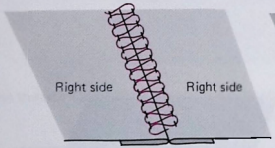
2. Press seam allowances to wrong sides of the two pieces of your fabric to be joined.

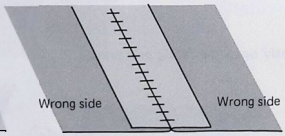


3. With wrong sides together, serge along the folded edges while guiding it against the FLATLOCK GUIDE PLATE.
   (without trimming)

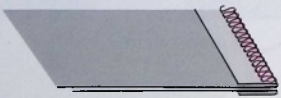


4. Gently pull on the two layers of fabric until the seam lies flat.





To have the ladder stitch on the right side of the garment, serge fabrics right sides facing as illustrated.



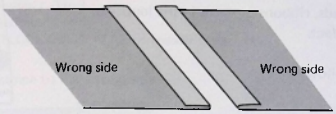
Faggoting

This is the joining of hemmed or folded edges with an openwork stitch.

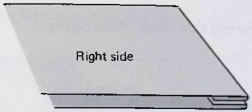
1. Set the machine as follows:

Stitch length:	3
Needle thread tension:	0 to 3
Looper thread tension:	2 to 5

2. Fold and press the seam allowances on two pieces of fabric to the wrong sides.

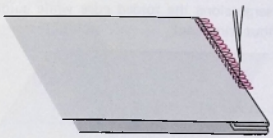


3. Place the two fabrics with wrong sides together, matching the folded edges.

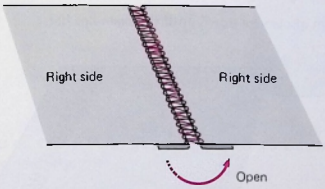


Serge the two pieces together along the folded edges guiding the fabric so the needle catches the least amount of the folds as possible.

Note: Do not use the FLATLOCK GUIDE PLATE.



5. Open the two pieces of fabric to create a "THREAD LADDER" between them.

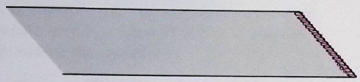


6. Try faggoting with various ornamental threads for a creative touch.

Flatlock Hemming

Use the following technique to hem a skirt or dress.

1. Finish the raw edge with overedging stitch.

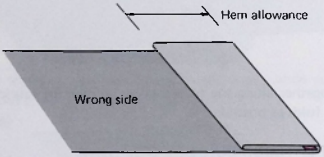


2. Use ornamental threads, ribbons or yarns in the looper to create a decorative effect.

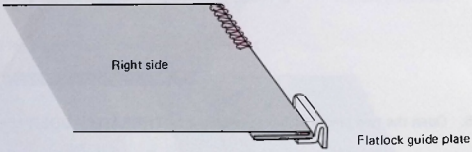
3. Set the machine as follows:

   Stitch length: 3
   Needle thread tension: 0 to 3
   Looper thread tension: 2 to 5
   Attach the FLATLOCK GUIDE PLATE on needle plate.

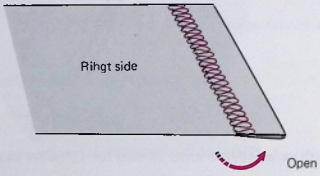
4. Fold hem allowance to wrong side twice. Press lightly.



5. From the right side, serge along the folded edge while guiding it against the FLATLOCK GUIDE PLATE. (without trimming)



6. Gently pull the hem allowance down until the seam lies flat. Press lightly.



Flatlock Elastic

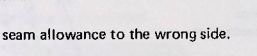
This technique is seen quite often in ready-to-wear.
Duplicate the lock with your Combi-DX.

1. Use finer threads in the same color as that of your fabric on both needle and looper.

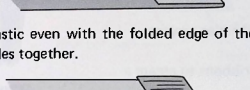
2. Set the machine as follows:

   Stitch length: 3
   Needle thread tension: 0 to 3
   Looper thread tension: 2 to 5
   Attach the FLATLOCK GUIDE PLATE on needle plate.

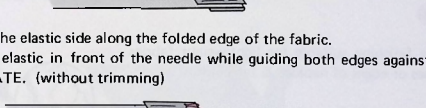
3. Fold the seam allowance to the wrong side.



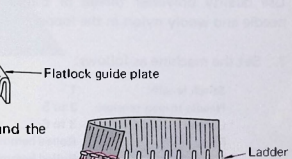
4. Place the elastic even with the folded edge of the fabric with right sides together.



5. Serge from the elastic side along the folded edge of the fabric.
   Stretch the elastic in front of the needle while guiding both edges against the FLATLOCK GUIDE PLATE. (without trimming)



6. Pull the elastic up until the edge of the fabric and the elastic are butted together.



There will be a ladder effect on the right side. If you want the braid-look on the right side, serge fabric and elastic with wrong sides together.

Flatlock Lace Application

Apply lace using the same method as above, substituting the lace for the elastic.

Narrow Hemming

Use this technique to finish outside edges of light to medium weight fabric.
It is not suitable for the fabrics that ravel easily.

To obtain the best results, use quality polyester thread in the needle and wooly nylon thread in the looper.

1. Set the machine as follows:

Stitch length:	1
Needle thread tension:	0 to 3
Looper thread tension:	3 to 6
Foot:	Rolled hemming foot
Needle plate:	Rolled hemming needle plate

2. Serge the edge of the fabric (one layer).
   * To get lettuce leaf edging, serge while stretching the fabric in front of the needle.
   This edging is effective for soft knits or bias wovens.

Experiment with various threads, yarns & ribbons to create a decorative effect.

Lettuce leaf edge

Rolled Hemming

A decorative edge finishing suitable for light-weight fabrics like frills on blouses or edges of napkins & tablecloths.

Use quality polyester thread or transparent thread in the needle and wooly nylon in the looper.

1. Set the machine as follows:

Stitch length:	1
Needle thread tension:	3 to 5
Looper thread tension:	3 to 6
Foot:	Rolled hemming foot
Needle plate:	Rolled hemming needle plate

2. Serge the edge of the fabric (one layer).

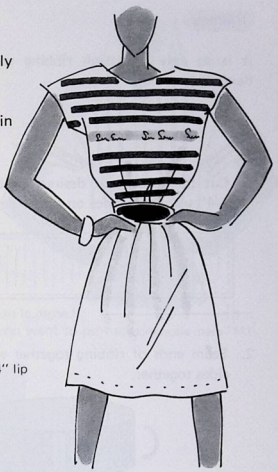
Experiment with various threads, yarns & ribbons to create a decorative edge.

Picot Edging

Picot edge finishing can be done with the same procedure as that of rolled hemming except the stitch length is to be set at "3".

Blind Hemming

The hem stitch that is invisible on the outside can be neatly done for most knit fabrics.

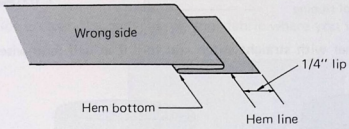


1. Use thread to match your fabric or transparent thread in needle.

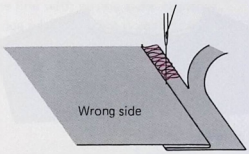
2. Set the machine as follows:

Stitch length:	3
Needle thread tension:	0 to 3
Looper thread tension:	3 to 6

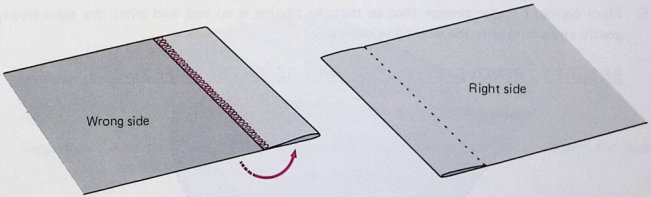
3. Fold your fabric as illustrated.



4. Position the hem line under the presser foot so that the needle will pierce just the very edge of the fold and the 1/4" lip will be trimmed away.



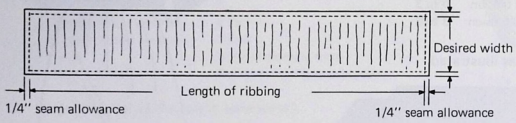
5. Unfold and press flat.



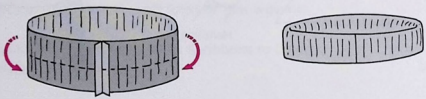
Ribbing

It is so easy to attach ribbing with fantastic finish and flexibility.

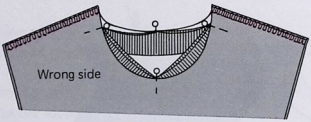
1. Cut the ribbing to desired width and length, allowing 1/4" seam allowance on each side.



2. Seam ends of ribbing together with straight stitch and fold it in half lenthwise with wrong sides together.



3. Divide the circle of ribbing and the garment edge into equal quarters and mark with pins. Match quarter divisions and pin together.

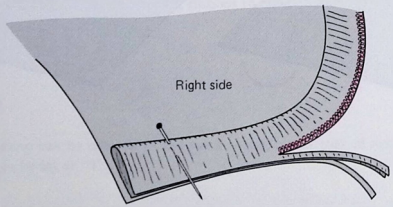


4. Set the machine for seamlock stitch as follows:

Stitch length:	3
Needle thread tension:	5 to 8
Looper thread tension:	0 to 3

5. Place garment under presser foot so that the ribbing is on top, and stitch the seam slowly, gently stretching only the ribbing as necessary.

BE SURE TO REMOVE PINS BEFORE THEY REACH THE KNIFE BLADES.



Pintuck

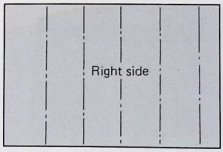
Pintucks add a personal touch to your garment.

1. Set the machine for rolled hem stitch as follows:

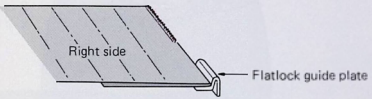
Stitch length:	3 or 1 (for satin stitch)
Needle thread tension:	2 to 5
Looper thread tension:	0.5 to 6
Foot:	Rolled hemming foot
Needle plate:	Rolled hemming needle plate

Attach the FLATLOCK GUIDE PLATE on needle plate.

2. Draw guide lines on the right side of your fabric where you want to pintuck.

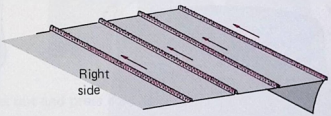


3. Fold the fabric along the line with wrong sides together.
Then serge the folded edge while guiding it against the FLATLOCK GUIDE PLATE.



4. Repeat for additional pleats.

Note: Sew every pleat in the same direction.



Suggestion: Use pearl cotton, embroidery thread or metallic thread in looper for nice ornamental pintucks.

5. Press tucks flat inthe same direction.

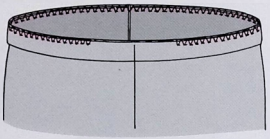
Attaching Pull On Waistband

1. Set the machine for seamlock stitch as follows:

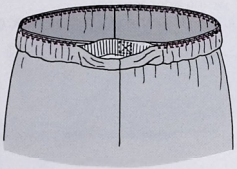
Stitch length:	3
Needle thread tension:	5 to 8
Looper thread tension:	0 to 3

2. Fold the waistband in half lengthwise with wrong sides together and press. Then unfold and serge ends together.

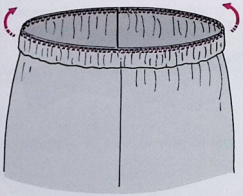
3. Fold the waistband with wrong sides together and serge it to the garment, leaving 1 to 2" unstitched for inserting the elastic.



4. Insert elastic and stitch the ends.



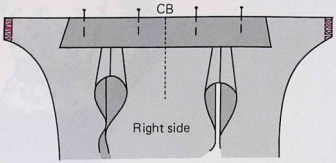
5. Serge remainder of the band to garment. Turn the waistband up and press seam down.



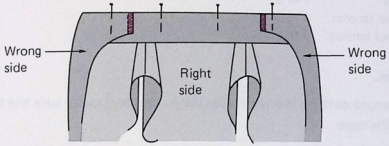
Attaching Collars

1. Make a collar.

2. Pin the collar to the right side of garment neckline matching center backs.



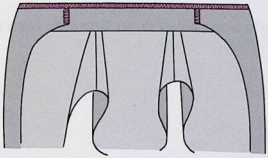
3. Fold each front facing along fold line over the collar and pin right sides together.



4. Set the machine for seamlock stitch as follows:

Stitch length:	3
Needle thread tension:	5 to 8
Looper thread tension:	0 to 3

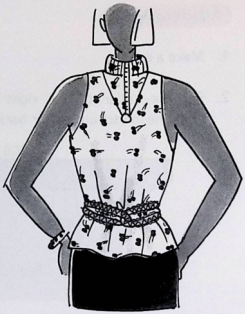
5. Serge the neckline edge.



6. Turn the right sides out and press lightly.

Braiding

When you want to make coordinating trim or belts, serge over a tape using ornamental threads such as yarn ribbon or buttonhole twist in the looper.
Choose a matching or contrasting color depending on desired effect.

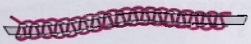


1. Set the machine for overedging stitch as follows:

Stitch length:	1 or 3
Needle thread tension:	0 to 3
Looper thread tension:	3 to 6

2. Serge over a tape.

   Make sure you avoid cutting the tape with the knives and make sure the needle drops just off the left end of the tape.



   You can use a cord, yarn or ribbon instead of the tape.

Note: Remove the upper knife with a screw driver when you use a tape wider than 1/8".